



Norman H. Bangerter
Governor

Suzanne Dandoy, M.D., M.P.H.
Executive Director

Kenneth L. Alkema
Director

DEPARTMENT OF HEALTH
DIVISION OF ENVIRONMENTAL HEALTH

288 North 1460 West
P.O. Box 16690
Salt Lake City, Utah 84116-0690
(801) 538-6121

Certified Mail

(Return-Receipt Requested)

January 31, 1991

Mr. Frank D. Wicks, General Manager
Barrick Mercur Gold Mine
P.O. Box 838
Tooele, UT 84074

Re: Dump Leach No. 3, December 27, 1990
Water Balance Monitoring Plan and January
15, 1991 Head Control Plan

Dear Mr. Wicks:

We have reviewed the above referenced plans and have found them unsatisfactory in meeting the requirements of our December 18, 1990 conditional approval for Dump Leach No. 3. Please revise these plans in accordance with the following comments.

Water Balance Monitoring Plan

1. Flow Diagram and Description - Barrick must provide detailed flow diagrams illustrating where flows are measured in the process stream(s). A detailed description of the flow measuring equipment will also be required.
2. Water Balance Sensitivity - Barrick's December 27, 1990 submittal omitted any evaluation of the sensitivity of water balance measurements, as required by Condition 7(b) of our conditional approval. This evaluation is required in order to assist the Executive Secretary in determining compliance of the facility during completion of the hydrogeologic report and justification of the compliance monitoring well network. We do agree that additional operational data will refine the tolerance limits of such measurements, and we are willing to adjust or modify these limits accordingly.
3. Flow Limits - Barrick's December 27, 1990 submittal also failed to provide flow limits by which to indicate seepage losses for the dump leach, as required by Condition 7(c) of the conditional approval. Once again these limits must be established in order to allow us to determine the compliance status of the operation while the hydrogeologic report and justification for the compliance monitoring well network are being completed. We suggest that Barrick consider using a ratio of flows applied to the dump leach to flows

DOGMA
MINERALS PROGRAM
FILE COPY

RECEIVED
FEB 07 1991

DIVISION OF
OIL, GAS & MINING

m/045/017

Mr. Frank Wicks

Page 2

January 31, 1991

extracted or lost (barren solution + precipitation + collected leakage : pregnant liquor + evaporation), and establish an upper control limit for both the daily maximum and the average monthly ratios. We also agree with you that as more operational data become available these limits can be modified, upon Executive Secretary approval.

4. Remedy to Flow Limit Violations - Any remedy must include: 1) actions to confirm the violation, such as rechecking records or measurements, and 2) intermediate corrective action to be taken to return the flows to acceptable limits within an acceptable time frame. Intermediate action would include return of the daily maximum ratio below the approved upper control limit within 24 hours or return the average monthly ratio below its approved upper control limit within 15 days. This could be accomplished through an increase in the pregnant liquor pumping rate or a reduction in the volume of fluids applied to the dump leach. Failure by Barrick to return either the daily maximum or the average monthly ratios to acceptable limits within the required time frames must result in notification of the Executive Secretary within 24 hours as per Part II I of the permit. Only after Barrick does not or is unable to return either the daily maximum or average monthly ratio below the respective ratio control limit within the required time frame, would Barrick be required to cease operation of the dump leach and remove all fluids therein in accordance with the tasks outlined in the Contingency Plan [Permit, Part I H(2)].
5. Monthly Reporting - Barrick shall also include: a) the estimated daily volume of fluid lost from the operation due to evaporation, and b) the daily volume of fluid pumped back to the dump if the leak collection system contains any fluid. Estimates of evaporation from pan evaporation rates are acceptable at this time, provided that Barrick conducts further studies to refine the evaporation rate of barren solution on the dump leach and submit the results thereof by June 1, 1991.

Head Control Plan

1. Daily Maximum Head Limit- The 25 ft maximum vertical head proposed in your January 15, 1991 submittal is unsupported by any technical explanation or description and does not appear to be significantly lower than the 30 ft limit found in the permit [Part I D(3)]. Consequently, Barrick shall submit detailed justification and description for the proposed daily maximum head limit, including detailed "as-built" plans for the pregnant liquor pumping system. As a reminder, we expect this daily head limit to represent the lowest sustainable head practical in the dump.
2. Average Monthly Head Limit - Barrick must also define and justify an upper control limit for an average monthly head for the process pool in the dump leach. Based on data reported thus far, we would anticipate this limit to be less than 20 ft.

Mr. Frank Wicks

Page 3

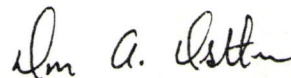
January 31, 1991

3. Plan to Control Head in the Dump - Barrick must also provide detailed plans to control the vertical head of the process pool in the dump leach to remain below either the daily maximum or the average monthly head limits approved by the Executive Secretary. This plan must include: 1) actions to confirm the violation of the head limit, such as rechecking records or measurements, and 2) intermediate corrective action to return the head to acceptable limits as soon as possible. Intermediate corrective action would include return of the daily maximum head below the approved upper control limit within 24 hours or return of the average monthly head below its approved upper control limit within 15 days. This could be accomplished through an increase in the pregnant liquor pumping rate or a reduction in the volume of fluids applied to the dump leach.
4. Monthly Reporting - Barrick shall report both daily maximum and daily average vertical head of the permanent process pool. Inclusion of this data with the monthly Water Balance Report is satisfactory.

The conditional approval dated December 18, 1990 required the submission of approvable water balance monitoring and head control plans by December 28, 1990 and January 15, 1991, respectively. We express disappointment that you have operated the facility since December 19, 1990 while these plans are substantively inadequate as discussed above. Therefore we strongly urge you to address these issues immediately. You are advised that failure to adequately resolve these issues within 10 working days of receipt of this letter will be considered a violation of both the December 18, 1990 conditional approval and the Ground Water Quality Discharge Permit [Part I E(2)(f) and Part I H (3)]. If you have questions please contact Loren Morton at 538-6146.

Sincerely,

Utah Water Pollution Control Committee



Don A. Ostler, P.E.
Executive Secretary

LBM:lm

cc: Grant Bagley, Asst. Attorney General
David Bird, Parsons, Behle & Latimer
Stephen Matern, Tooele County Health Dept.
Wayne Hedberg, DOGM
Glade Shelley, Utah County Health Dept.